

THE ASTROPHYSICAL JOURNAL  
CONTENTS OF VOLUME 538, PART 1

2000 JULY 20, NUMBER 1

	Page
INFLUENCE OF THE ENVIRONMENTAL DARK MATTER ON QSO-CLUSTER ASSOCIATIONS AND ON CLUSTER MASS ESTIMATES <i>Zuhui Fan &amp; Tzihong Chiueh</i>	1
PERTURBATIVE ANALYSIS OF ADAPTIVE SMOOTHING METHODS IN QUANTIFYING LARGE-SCALE STRUCTURE <i>Naoki Seto</i>	11
CALTECH FAINT GALAXY REDSHIFT. X. A REDSHIFT SURVEY IN THE REGION HUBBLE DEEP FIELD NORTH <i>Judith G. Cohen, David, W. Hogg, Roger Blandford, Lennox L. Cowie, Esther Hu, Antoinette Songaila, Patrick Shopbell, &amp; Kevin Richberg</i>	29
LIMITS ON HOT INTRACLUSTER GAS CONTRIBUTIONS TO THE TENERIFE TEMPERATURE ANISOTROPY MAP <i>J. A. Rubiño-Martin, F. Atrio-Barandela, &amp; C. Hernández-Monteagudo</i>	53
LENSING-INDUCED CLUSTER SIGNATURES IN THE COSMIC MICROWAVE BACKGROUND <i>Uros Seljak &amp; Matias Zaldarriaga</i>	57
THE $L_X$ - $T$ , $L_X$ - $\sigma$ , AND $\sigma$ - $T$ RELATIONS FOR GROUPS OF GALAXIES PROPERTIES OF RADIO-SELECTED BROAD ABSORPTION LINE QUASARS FROM THE FIRST BRIGHT QUASAR <i>Yan-Jie Xue &amp; Xiang-Ping Wu</i>	65
PROPERTIES OF RADIO-SELECTED BROAD ABSORPTION LINE QUASARS FROM THE FIRST BRIGHT QUASAR SURVEY <i>Robert H. Becker, Richard L. White, Michael D. Gregg, Michael S. Brotherton, Sally A. Laurent-Muehleisen, &amp; Nahum Arav</i>	72
PHYSICAL BIAS OF GALAXIES FROM LARGE-SCALE HYDRODYNAMIC SIMULATIONS <i>Renyue Cen &amp; Jeremiah P. Ostriker</i>	83
A PREDICTION OF OBSERVABLE ROTATION IN THE INTRACLUSTER MEDIUM OF ABELL 3266 <i>Kurt Roettiger &amp; Ricardo Flores</i>	92
PROBING THE DUST OBSCURATION IN SEYFERT GALAXIES USING INFRARED SPECTROSCOPY <i>Joseph H. Rhee &amp; James E. Larkin</i>	98
RELATIVISTIC WINDS FROM COMPACT GAMMA-RAY SOURCES. II. PAIR LOADING AND RADIATIVE ACCELERATION IN GAMMA-RAY BURSTS <i>Christopher Thompson &amp; Piero Madau</i>	105
THE POLYTROPIC EQUATION OF STATE OF INTERSTELLAR GAS CLOUDS <i>Marco Spaans &amp; Joseph Silk</i>	115
ROSAT/ASCA OBSERVATIONS OF A SERENDIPITOUS BL LACERTAE OBJECT PKS 2316-423: THE VARIABLE HIGH-ENERGY TAIL OF SYNCHROTRON RADIATION <i>Sui-Jian Xue, You-Hong Zhang, &amp; Jian-Sheng Chen</i>	121
CORRELATED INTENSE X-RAY AND TeV ACTIVITY OF MARKARIAN 501 IN 1998 JUNE <i>R. M. Sambruna, F. A. Aharonian, H. Krawczynski, A. G. Akhperjanian, J. A. Barrio, K. Bernlöhr, H. Bojahr, I. Calle, J. L. Contreras, J. Cortina, S. Denninghoff, V. Fonseca, J. C. Gonzalez, N. Götting, G. Heinzelmann, M. Memberger, G. Hermann, A. Heusler, W. Hofmann, D. Horns, I. Ibarra, R. Kankanyan, M. Kestel, J. Kettler, C. Köhler, A. Kohnle, A. Konopelko, H. Kornmeyer, D. Kranish, H. Lampeitl, A. Lindner, E. Lorenz, N. Magnussen, O. Mang, H. Meyer, R. Mirzoyan, A. Moralejo, L. Padilla, M. Panter, R. Plaga, A. Plyasheshnikov, J. Prah, G. Pühlhofer, G. Rauberberg, A. Röhring, V. Sahakian, M. Samorski, M. Schilling, D. Schmele, F. Schröder, W. Stamm, M. Tluczykont, H. J. Völk, B. Weibel-Sooth, C. Wirdner, M. Willmer, W. Wittek, L. Chou, P. S. Coppi, R. Rothschild, &amp; C. M. Urry</i>	127
THE SPATIAL DISTRIBUTION OF ATOMIC CARBON EMISSION IN THE GIANT MOLECULAR CLOUD NGC 604-2 <i>Christopher L. Taylor &amp; Christine D. Wilson</i>	134
THE O/H DISTRIBUTION IN NGC 7479: EVIDENCE FOR A MINOR MERGER EVENT <i>Pierre Martin, Mario Lelievre, &amp; Jean-Rene Roy</i>	141

	<i>Page</i>
OBSERVATION OF AN EXTRA EMISSION AROUND 2 MeV IN THE SPECTRUM OF AN INTENSE GAMMA-RAY BURST <i>C. Barat, J. P. Lestrade, J.-P. Dezelay, R. Sunyaev, O. Terekhov, &amp; A. Kuznetsov</i>	152
GAMMA-RAY BURST CLASS PROPERTIES <i>Jon Hakkila, David J. Haglin, Geoffrey N. Pendleton, Robert S. Mallozzi, Charles A. Meegan, &amp; Richard J. Roiger</i>	165
INTRINSIC CONSTRAINTS ON VERY HIGH ENERGY EMISSION IN GAMMA-RAY-LOUD BLAZARS <i>Jian-Min Wang</i>	181
TOWARD A MODEL FOR THE PROGENITORS OF GAMMA-RAY BURSTS <i>Mario Livio &amp; Eli Waxman</i>	187
NUMERICAL INVESTIGATION OF PERPENDICULAR DIFFUSION OF CHARGED TEST PARTICLES IN WEAK MAGNETOSTATIC SLAB TURBULENCE <i>R. L. Mace, William H. Matthaeus, &amp; John W. Bieber</i>	192
NONTHERMAL EMISSION FROM A SUPERNOVA REMNANT IN A MOLECULAR CLOUD <i>A. M. Bykov, R. A. Chevalier, D. C. Ellison, &amp; Yu. A. Uvarov</i>	203
THE GENERATION OF MAGNETIC FIELDS THROUGH DRIVEN TURBULENCE <i>Jungyeon Cho &amp; Ethan T. Vishniac</i>	217
INTERSTELLAR CLUMP BEHAVIOR AND MAGNETIC EFFECTS IN SMALL CLUMPS <i>Jacques P. Vallee</i>	226
THE FORMATION OF A MULTIPLE PLANETARY NEBULA <i>HUBBLE SPACE TELESCOPE</i> /WFPC2 OBSERVATIONS OF KJPN 8 <i>J. A. López, J. Meaburn, L. F. Rodríguez, R. Vázquez, W. Steffen, &amp; M. Bryce</i>	233
THE FORMATION OF VERY NARROW WAIST BIPOLAR PLANETARY NEBULAE <i>Noam Soker &amp; Saul Rappaport</i>	241
HOW TO IDENTIFY PRE-PROTOSTELLAR CORES <i>Erik M. Gregersen &amp; Neal J. Evans II</i>	260
PROPER MOTION OF WATER MASERS ASSOCIATED WITH IRAS 21391 + 5802: BIPOLAR OUTFLOW AND AN AU-SCALE DUSTY CIRCUMSTELLAR SHELL <i>Nimesh A. Patel, Lincoln J. Greenhill, James Herrnstein, Qizhou Zhang, James M. Moran, Paul T. P. Ho, &amp; Paul F. Goldsmith</i>	268
THE PROPERTIES OF MOLECULAR HYDROGEN TOWARD THE ORION BELT STARS FROM OBSERVATIONS BY THE INTERSTELLAR MEDIUM ABSORPTION PROFILE SPECTROGRAPH <i>Edward B. Jenkins, Przemyslaw R. Wozniak, Ulysses J. Sofia, George Sonneborn, &amp; Todd M. Tripp</i>	275
ON THE HELIUM CONTENT OF GALACTIC GLOBULAR CLUSTERS VIA THE R-PARAMETER <i>M. Zoccali, S. Cassisi, G. Bono, G. Piotto, R. M. Rich, &amp; S. G. Djorgovski</i>	289
TRANSITION FROM STANDARD DISK TO ADVECTION-DOMINATED ACCRETION FLOW <i>Tadashi Mammoto &amp; Shoji Kato</i>	295
THE TIMING EVOLUTION OF 4U 1630-47 DURING ITS 1998 OUTBURST <i>S. W. Dieters, T. Belloni, E. Kuulkers, P. Woods, W. Cui, S. N. Zhang, W. Chen, M. van der Klis, J. van Paradijs, J. Swank, W. H. G. Lewin, &amp; C. Kouveliotou</i>	307
ON THE TRIPLE NATURE OF THE CATAclysmic VARIABLE VY SCULPTORIS <i>I. G. Martínez-Pais, N. L. Martín-Hernández, J. Casares, &amp; P. Rodríguez-Gil</i>	315
ON THE TILTING OF PROTOSTELLAR DISKS BY RESONANT TIDAL EFFECTS <i>S. H. Lubow &amp; G. I. Ogilvie</i>	326
VANADIUM OXIDE IN THE SPECTRA OF MIRA VARIABLES <i>Michael W. Castelaz, Donald G. Luttermoser, &amp; Robert A. Piontek</i>	341
EFFECTS OF DIFFERENT FROZEN-CONVECTION APPROXIMATIONS ON STELLAR NONADIABATIC PULSATION <i>Y. Li</i>	346
AN EFFECTIVE TEMPERATURE SCALE FOR LATE-M AND L DWARFS, FROM RESONANCE ABSORPTION LINES OF Cs I AND Rb I <i>Gibor Basri, Subhanjoy Mohanty, France Allard, Peter H. Hauschildt, Xavier Delfosse, Eduardo L. Martin, Thierry Forveille, &amp; Bertrand Goldman</i>	363
SOLAR SYSTEM TESTS OF HIGHER DIMENSIONAL GRAVITY <i>Hongya Liu &amp; J. M. Overduin</i>	386
FAR-ULTRAVIOLET SPECTROSCOPY OF VENUS AND MARS AT 4 Å RESOLUTION WITH THE HOPKINS ULTRAVIOLET TELESCOPE ON ASTRO-2 <i>Paul D. Feldman, Eric B. Burgh, Samuel T. Durrance, &amp; Arthur F. Davidsen</i>	395

# CONTENTS

v

OBSERVATIONAL UPPER LIMITS TO LOW DEGREE SOLAR $g$ -MODES <i>T. Appourchaux, C. Fröhlich, B. Andersen, G. Berthomieu, W. J. Chaplin, Y. Elsworth, W. Finsterle, D. O. Gough, J. T. Hoeksema, G. R. Isaak, G. A. Kosovichev, J. Provost, P. H. Scherrer, T. Sekii, &amp; T. Toutain</i>	Page 401
GLOBAL SOLAR CORONA REVEALED BY TIME SERIES OBSERVATIONS <i>Jing Li, J. Kuhn, B. LaBonte, J. C. Raymond, &amp; L. W. Acton</i>	415
WAVELENGTHS OF FORBIDDEN TRANSITIONS ARISING FROM LEVELS WITHIN THE $\text{Fe}^{+19} 2s^2 2p^3$ GROUND CONFIGURATION <i>T. A. Kucera, U. Feldman, K. G. Widing, &amp; W. Curdt</i>	424
THERMAL INFRARED IMAGING AND SPECTROSCOPY OF COMET HALE-BOPP <i>T. L. Hayward, M. S. Hanner, &amp; Z. Sekanina</i>	428
ELECTRON-CYCLOTRON MASER DRIVEN BY CHARGED-PARTICLE ACCELERATION FROM MAGNETIC FIELD-ALIGNED POTENTIALS <i>R. E. Etgun, C. W. Carlson, J. P. McFadden, G. T. Delory, R. J. Strangeway, &amp; P. L. Pritchett</i>	456
ERRATUM AN ASSESSMENT OF MAGNETIC CONDITIONS FOR STRONG CORONAL HEATING IN SOLAR ACTIVE REGIONS BY COMPARING OBSERVED LOOPS WITH COMPUTED POTENTIAL FIELD LINES <i>D. A. Falconer, G. A. Gary, R. L. Moore, &amp; J. G. Porter</i>	467
ABSTRACTS OF THE ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES, 2000 AUGUST	468
2000 AUGUST 1, NUMBER 2	
EFFICIENT COMPUTATION OF COSMIC MICROWAVE BACKGROUND ANISOTROPIES IN CLOSED FRIEDMANN-ROBERTSON-WALKER MODELS <i>Antony Lewis, Anthony Challinor, &amp; Anthony Lasenby</i>	473
DARK HALO AND DISK GALAXY SCALING LAWS IN HIERARCHICAL UNIVERSES <i>Julio F. Navarro &amp; Matthias Steinmetz</i>	477
ABSENCE OF "GHOST IMAGES" EXCLUDES LARGE VALUES OF THE COSMOLOGICAL CONSTANT <i>J. M. Eppley &amp; R. B. Partridge</i>	489
PHOTOMETRY AND PHOTOMETRIC REDSHIFTS OF FAINT GALAXIES IN THE HUBBLE DEEP FIELD SOUTH NICMOS FIELD <i>Noriaki Yahata, Kenneth M. Lanzetta, Hsiao-Wen Chen, Alberto Fernández-Soto, Sebastian M. Pascarelle, Amos Yahil, &amp; Richard C. Puetter</i>	493
A DETERMINATION OF THE HUBBLE CONSTANT USING MEASUREMENTS OF X-RAY EMISSION AND THE SUNYAEV-ZELDOVICH EFFECT AT MILLIMETER WAVELENGTHS IN THE CLUSTER ABELL 1835 <i>P. D. Mauskopf, P. A. R. Ade, S. W. Allen, S. E. Church, A. C. Edge, K. M. Ganga, W. L. Holzapfel, A. E. Lange, B. K. Rownd, B. J. Philhour, &amp; M. C. Runyan</i>	505
SELF-SIMILAR COLLAPSE AND THE STRUCTURE OF DARK MATTER HALOS: A FLUID APPROACH <i>Kandaswamy Subramanian</i>	517
THE STRUCTURE OF DARK MATTER HALOS IN HIERARCHICAL CLUSTERING THEORIES <i>Kandaswamy Subramanian, Renyue Cen, &amp; Jeremiah P. Ostriker</i>	528
RADIAL TEMPERATURE PROFILES OF 11 CLUSTERS OF GALAXIES OBSERVED WITH BEPPPOSAX <i>Jimmy A. Irwin &amp; Joel N. Bregman</i>	543
AMBIGUITIES IN FITS TO THE COMPLEX X-RAY SPECTRA OF STARBURST GALAXIES <i>Michael Dahlem, Arvind Parmar, Tim Oosterbroek, Astrid Orr, Kimberly A. Weaver, &amp; Timothy M. Heckman</i>	555
GAS STRIPPING OF DWARF GALAXIES IN CLUSTERS OF GALAXIES <i>Masao Mori &amp; Andreas Burkert</i>	559
LOPSIDED GALAXIES, WEAK INTERACTIONS, AND BOOSTING THE STAR FORMATION RATE <i>Gregory Rudnick, Hans-Walter Rix, &amp; Robert C. Kennicutt, Jr.</i>	569
THE NARROW-LINE REGION OF NARROW-LINE SEYFERT 1 GALAXIES <i>A. Rodriguez-Ardila, Luc Binette, Miriani G. Pastoriza, &amp; Carlos J. Donzelli</i>	581
AGE, EVOLUTION, AND DISPERSION OF THE LOOSE GROUPS OF BLUE STARS IN THE NORTHEAST RADIO LOBE OF CENTAURUS A <i>Caleb I. Fassett &amp; John A. Graham</i>	594
A NEW PROBE OF THE MOLECULAR GAS IN GALAXIES: APPLICATION TO M101 <i>Denise A. Smith, Ronald J. Allen, Ralph C. Bohlin, Natalya Nicholson, &amp; Theodore P. Stecher</i>	608

	Page
STRONG, VARIABLE CIRCULAR POLARIZATION IN PKS 1519-273 <i>J.-P. Macquart, Lucyna Kedziora-Chudczer, David P. Rayner, &amp; David L. Jauncey</i>	623
A PLASMA INSTABILITY THEORY OF GAMMA-RAY BURST EMISSION <i>J. J. Brainerd</i>	628
GRB 990510: ON THE POSSIBILITY OF A BEAMED X-RAY AFTERGLOW <i>E. Kuulkers, L. A. Antonelli, L. Kuiper, J. S. Kaastra, L. Amati, E. Costa, F. Frontera, J. Heise, J. J. M. in 't Zand, N. Masetti, L. Nicastro, E. Pian, &amp; P. Soffitta</i>	638
MODELING OF LASER-GENERATED RADIATIVE BLAST WAVES <i>K. A. Keilty, E. P. Liang, T. Ditmire, B. A. Remington, K. Shigemori, &amp; A. M. Rubenchik</i>	645
ASTROMETRIC RESOLUTION OF SEVERELY DEGENERATE BINARY MICROLENSING EVENTS <i>Andrew Gould &amp; Cheongho Han</i>	653
CONSTRAINING THE LOCATION OF MICROLENSING OBJECTS BY USING THE FINITE SOURCE EFFECT IN EAGLE EVENTS <i>Takahiro Sumi &amp; Mareki Honma</i>	657
KINEMATICS, KINETIC TEMPERATURES, AND COLUMN DENSITIES OF NH <sub>3</sub> IN THE ORION HOT CORE <i>T. L. Wilson, R. A. Gaume, P. Gensheimer, &amp; K. J. Johnston</i>	665
A THEORETICAL STUDY OF THE $A^2\Sigma^+-X^2\Pi$ SYSTEM OF THE SiP MOLECULE <i>F. R. Ornellas, C. M. Andreazza, &amp; A. A. de Almeida</i>	675
WINDS FROM ACCRETION DISKS DRIVEN BY RADIATION AND MAGNETOCENTRIFUGAL FORCE <i>Daniel Proga</i>	684
DEUTERIUM ENRICHMENT OF POLYCYCLIC AROMATIC HYDROCARBONS BY PHOTOCHEMICALLY INDUCED EXCHANGE WITH DEUTERIUM-RICH COSMIC ICES <i>Scott A. Sandford, Max P. Bernstein, Louis J. Allamandola, J. Seb Gillette, &amp; Richard N. Zare</i>	691
INFRARED SPACE OBSERVATORY SPECTROSCOPY OF HH 7-11 FLOW AND ITS REDSHIFTED COUNTERPART <i>Sergio Molinari, Alberto Noriega-Crespo, Cecilia Ceccarelli, Brunella Nisini, Teresa Giannini, Dario Lorenzetti, Emmanuel Caux, René Liseau, Paolo Saraceno, &amp; Glenn J. White</i>	698
DYNAMICS OF THE PARKER-JEANS INSTABILITY IN A GALACTIC GASEOUS DISK <i>Wenchien Chou, Ryoji Matsumoto, Toshiki Tajima, Michihisa Umekawa, &amp; Kazunari Shibata</i>	710
VERY LARGE ARRAY OBSERVATIONS OF HIGH-VELOCITY H I IN L1551 <i>C. Giovanardi, L. F. Rodríguez, S. Lizano, &amp; J. Cantó</i>	728
THE STRUCTURE OF THE MONOCEROS R2 MOLECULAR CLOUD CORE <i>Minho Choi, Neal J. Evans II, Mario Tafalla, &amp; Rafael Bachiller</i>	738
KINEMATICS AND DISTANCE OF WATER MASERS IN W3 IRS 5 <i>Hiroshi Imai, Osamu Kameya, Tetsuo Sasao, Makoto Miyoshi, Shuji Deguchi, Shinji Horiuchi, &amp; Yoshiharu Asaki</i>	751
LABORATORY DETECTION OF FIVE NEW LINEAR SILICON CARBIDES: SiC <sub>3</sub> , SiC <sub>5</sub> , SiC <sub>6</sub> , SiC <sub>7</sub> , AND SiC <sub>8</sub> <i>M. C. McCarthy, A. J. Apponi, C. A. Gottlieb, &amp; P. Thaddeus</i>	766
VACUUM ULTRAVIOLET RESONANCE ABSORPTION $f$ -VALUES FOR Ni II <i>J. A. Fedchak, L. M. Wiese, &amp; J. E. Lawler</i>	773
SETTLING ONTO THE MAIN SEQUENCE: ROSAT OBSERVATIONS OF $\eta$ AND $\chi$ PERSEI <i>Nancy Ramage Evans &amp; Fredrick D. Seward</i>	777
A BAYESIAN ANALYSIS OF MODELS FOR THE DUST CLOUD AROUND FOMALHAUT <i>Paul M. Harvey &amp; William H. Jefferys</i>	783
WFP2 IMAGES OF A FACE-ON DISK SURROUNDING TW HYDRAE <i>John E. Krist, Karl R. Stapelfeldt, François Ménard, Deborah L. Padgett, &amp; Christopher J. Burrows</i>	793
WATER ON THE EARLY M SUPERGIANT STARS $\alpha$ ORIONIS AND $\mu$ CEPHEI <i>T. Tsuji</i>	801
X-RAY EMISSION FROM COLLIDING WIND SHOCKS IN THE WOLF-RAYET BINARY WR 140 <i>Svetozar Z. Zhekov &amp; Stephen L. Skinner</i>	808
THE GAMMA-RAY PULSAR POPULATION <i>M. A. McLaughlin &amp; J. M. Cordes</i>	818
CONSTRAINTS ON THE DELAYED TRANSITION TO DETONATION IN TYPE Ia SUPERNOVAE <i>A. M. Lisewski, W. Hillebrandt, &amp; S. E. Woosley</i>	831

# CONTENTS

vii

WHY STARS BECOME RED GIANTS <i>Daiichiro Sugimoto &amp; Masayuki Y. Fujimoto</i>	Page 837
WHAT IS THE NATURE OF THE SPECTROSCOPIC COMPANION OF THE EARLY B STAR $\lambda$ SCORPII? <i>Thomas W. Berghöfer, Stephane Vennes, &amp; Jean Dupuis</i>	854
ON THE RAPID SPIN-DOWN AND LOW-LUMINOSITY PULSED EMISSION FROM AE AQUarii <i>Chul-Sung Choi &amp; Insu Yi</i>	862
RADIAL OSCILLATIONS OF QUARK STARS IN STRONG MAGNETIC FIELDS <i>J. D. Anand, N. Chandrika Devi, V. K. Gupta, &amp; S. Singh</i>	870
OPACITY SAMPLING IN RADIATIVE ACCELERATION CALCULATIONS <i>F. LeBlanc, G. Michaud, &amp; J. Richer</i>	876
ALBEDO AND REFLECTION SPECTRA OF EXTRASOLAR GIANT PLANETS <i>David Sudarsky, Adam Burrows, &amp; Philip Pinto</i>	885
HIGH-RESOLUTION HUBBLE SPACE TELESCOPE STIS SPECTRA OF C I AND CO IN THE $\beta$ PICTORIS CIRCUMSTELLAR DISK <i>A. Roberge, P. D. Feldman, A. M. Lagrange, A. Vidal-Madjar, R. Ferlet, A. Jolly, J. L. Lemaire, &amp; F. Rostas</i>	904
INJECTION OF RADIOACTIVITIES INTO THE PRESOLAR CLOUD: CONVERGENCE TESTING <i>Harri A. T. Vanhala &amp; Alan P. Boss</i>	911
ULTRAVIOLET SPECTROSCOPY OF POLAR CORONAL JETS <i>D. Dobrzycka, J. C. Raymond, &amp; S. R. Cranmer</i>	922
MODELING THE 1994 APRIL 14 POLAR CROWN SRX ARCADE USING THREE-DIMENSIONAL MAGNETOHYDROSTATIC EQUILIBRIUM SOLUTIONS <i>X. P. Zhao, J. T. Hoeksema, &amp; P. H. Scherrer</i>	932
CENTER-TO-LIMB VARIATION OF SOLAR GRANULATION FROM PARTIAL ECLIPSE OBSERVATIONS <i>M. Sánchez Cuberes, J. A. Bonet, M. Vázquez, &amp; A. D. Wittmann</i>	940
CORONAL HEATING: ENERGY RELEASE ASSOCIATED WITH CHROMOSPHERIC MAGNETIC RECONNECTION <i>Colin B. Roald, P. A. Sturrock, &amp; Richard Wolfson</i>	960
FLARE-RELATED CHANGES OF AN ACTIVE REGION MAGNETIC FIELD <i>V. B. Yurchyshyn, V. I. Abramenko, &amp; V. Carbone</i>	968
ERRATUM EMISSION-LINE SURVEYS AS PROBES OF THE SPATIAL DISTRIBUTION OF DWARF GALAXIES. I. THE UNIVERSITY OF MICHIGAN SURVEY <i>Janice C. Lee, John J. Salzer, Daniel A. Law, &amp; Jessica L. Rosenberg</i>	980
INSTRUCTIONS TO AUTHORS	i